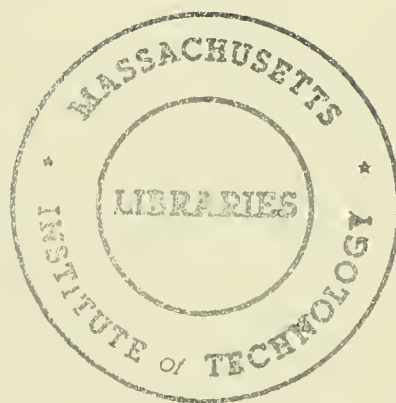


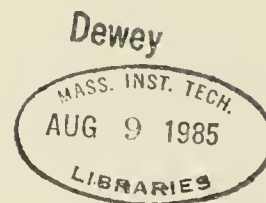
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**WORKING PAPER**  
**ALFRED P. SLOAN SCHOOL OF MANAGEMENT**

**AUDITOR CHANGES FOLLOWING BIG EIGHT  
MERGERS WITH NON-BIG EIGHT AUDIT FIRMS**

by  
Paul M. Healy  
Massachusetts Institute of Technology  
and  
Thomas Lys  
Northwestern University  
March 1985

MIT Sloan School of Management Working Paper #1645-85

**MASSACHUSETTS  
INSTITUTE OF TECHNOLOGY  
50 MEMORIAL DRIVE  
CAMBRIDGE, MASSACHUSETTS 02139**



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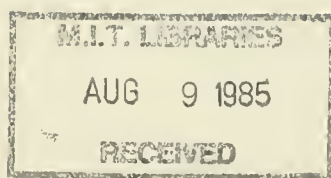
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We wish to thank Andrew Christie, Ken French, Bruce Johnson, Eric Noreen, Ross Watts, and Jerold Zimmerman for their helpful comments on previous drafts. All remaining errors are, of course, our responsibility. Research work was performed by Ashok Natarajan. Financial support was provided in part by the Ernst and Whinney Foundation and by the Accounting Research Center, J. L. Kellogg Graduate School of Management, Northwestern University.





## **ABSTRACT**

### **Auditor Changes Following Mergers Between Big Eight and Non-Big Eight Audit Firms**

This paper examines the reaction of clients of "non-Big Eight" audit firms to mergers of their auditors with "Big-Eight" firms. We postulate that a small audit firm's clients will retain a Big Eight acquirer following a merger if they benefit from the Big Eight firm's higher audit quality, or its network of audit offices. Clients that do not have these economic incentives to retain the Big Eight firm are more likely to change to another small audit firm following the merger. Empirical tests of the characteristics of clients that remain with a Big Eight Acquirer or change to another smaller auditor following an audit merger generally support the theory.



## 1. INTRODUCTION

"Big Eight" audit firm mergers with "non-Big Eight" firms have been a particularly successful means for the Big Eight to increase their portfolio of clients. This is evidenced by the findings of Coe and Palmon [1979], who report that from 1957 to 1975, 57 percent of their sample of client changes from smaller to Big Eight audit firms resulted from the Big Eight auditor absorbing the smaller firm in a merger.<sup>1</sup> The recent popularity of these events has increased regulatory and financial community interest in audit mergers.<sup>2</sup>

This paper examines auditor changes following Big Eight mergers with small audit firms. Mergers will only increase Big Eight firms' client portfolios if the small firms' clients retain the Big Eight acquirer following the merger. We discuss the economic incentives of clients to retain a Big Eight acquirer or to return to another small auditor following a merger with their small audit firm. Clients that benefit from the Big Eight firm's audit quality, or its geographically dispersed network of offices are expected to employ the acquirer. Clients that do not benefit from these services are more likely to change to a small auditor following the merger.

To test our hypotheses, we use a sample of two Big Eight acquisitions for which public information is available. The first is the 1977 merger of J. K. Lasser with Touche Ross, and the second is the merger of Leidesdorf and Company with Ernst and Ernst (now Ernst and Whinney). These tests are, by necessity, based on rather limited data and, therefore, are not very powerful. Nonetheless, the results are generally consistent with our hypotheses, and provide preliminary evidence on economic variables that might be useful to potential Big Eight audit firms for assessing the responses of clients of a small audit firm to a proposed merger.

The paper is organized as follows: in Section 2, we discuss differences between the services of Big Eight and non-Big Eight firms and predict client responses to a Big Eight merger with their smaller audit firm. Empirical tests and results are reported in Section 3, and our conclusions are presented in Section 4.

## **2. AUDITOR CHANGES FOLLOWING AUDITOR MERGERS**

### **2.1 Comparison of Big Eight and Non-Big Eight Audit Services**

We discuss two related differences between Big Eight and non-Big Eight audit firms: differences in audit quality, and in the geographic dispersion of their audit offices. These are not the only differences between Big Eight and non-Big Eight audit firms. For example, Big Eight firms typically offer specialized consulting services that are not available from small auditors. By excluding considerations other than audit quality and geographic dispersion from the auditor selection decision, we reduce the power of our empirical tests.

#### **Audit Quality**

Agency theory implies that the role of the auditor is to independently verify accounting numbers prepared by managers for use in compensation and lending contracts [see Jensen and Meckling, 1976; Watts, 1977; Simunic, 1980; and Dopuch and Simunic, 1980]. These contracts are designed to mitigate incentive problems created by the separation of ownership and control. By reviewing the financial statements, the auditor increases the credibility of the accounting numbers and the value of the contracts to the stockholders, bondholders and managers of the firm. The greater the quality of the audit, that is, the probability that the auditor detects and reports accounting irregularities,<sup>3</sup> the greater the audit's value to the contracting parties.

Audit quality is costly to observe and measure. The audit firm therefore has an incentive to lower these costs to increase the value of its services. We postulate that the costs of assessing audit quality increase if the audit firm supplies different quality audits to each client since it is costly for the users of audit reports to distinguish differences in quality across clients. The audit firm therefore has an incentive to supply the same quality to all its clients.<sup>4</sup> Quality varies across audit firms allowing companies to self-select an audit firm that offers demanded quality.

Even if audit firms supply a single audit quality, managers and owners cannot directly observe what quality level is supplied by a given firm. DeAngelo [1981b] argues that audit firm size provides a signal of audit quality.

Size alone alters auditors' incentives such that, *ceteris paribus*, larger audit firms supply a higher level of audit quality. When audit technology is characterized by significant start-up costs, incumbent auditors earn client-specific quasi-rents. These quasi-rents, when subject to loss from discovery of a lower quality audit than promised, serve as collateral against such opportunistic behavior. This implies that, *ceteris paribus*, the larger the auditor as measured by number of clients, the less incentive the auditor has to behave opportunistically, and the higher the perceived quality of the audit.<sup>5</sup>

If Big Eight firms provide higher quality audit services than non-Big Eight firms, clients with positive stockholder values for high quality audits (net of their cost) will choose a Big Eight audit firm. Clients whose stockholders do not value high quality audits more than their cost will select a non-Big Eight firm.

#### Geographic Dispersion of Audit Offices

Big Eight firms have national and international audit offices, whereas non-Big Eight firms typically only operate in a region, state or city. We argue that this difference induces a client with national and international operations

to select a Big Eight firm which services these same geographic regions. The client could acquire a different firm in each region to audit its operations. But if there are economies in audit coordination costs for one firm to audit the corporation, the client will select a Big Eight firm that services the geographic regions where it operates. Conversely, a client located in one region, other things held constant, will choose a non-Big Eight firm servicing just that area.

In summary, we argue that Big Eight and non-Big Eight firms differ in two dimensions. Big Eight firms offer higher quality audits and greater geographical dispersion of their offices than non-Big Eight firms. Clients with positive stockholder values of these incremental services (net of their cost) select a Big Eight firm and clients with negative net equity values choose a non-Big Eight firm.

## 2.2 The Effect of Audit Firm Mergers on Auditor Changes

Increases in demand for the incremental services of Big Eight firms induce clients of non-Big Eight firms to change auditors. These companies can change voluntarily. However, they incur start-up costs when they replace their audit firm [See DeAngelo, 1981a]. Start-up costs include the auditor's fee for examining and evaluating the client's accounting system and the costs of the additional time spent by management explaining the system to the new auditor.

A merger of a non-Big Eight firm with a Big Eight firm provides an alternative opportunity for the acquired auditor's clients to change their audit firm. The Big Eight firm has an incentive to impose its audit standards on the target's partners and staff to maintain its investment in brand name. By retaining the acquiring Big Eight firm, target clients therefore receive the incremental services offered by their new audit firm: higher quality audit



services and an international network of offices. Further, the merger reduces many of the start-up costs that ordinarily accompany auditor displacement since the partners and staff of the target are retained by the acquirer. These personnel continue to audit their former clients but in compliance with the Big Eight firm's standards. The allocation of saved start-up costs between the clients of the acquired firm and the Big Eight firm depends on the relative bargaining strengths of the two groups.

Clients of an acquired small auditor can respond to a Big Eight merger in two ways: they can remain with the acquirer, or they can change to another small audit firm. If the net effect of the merger on stockholder wealth is positive, the client is expected to remain with the Big Eight acquirer. If the net effect is negative, the client will either remain with the Big Eight acquirer, or incur the start-up cost of changing to another non-Big Eight auditor.<sup>6</sup> We postulate that the net benefits of the audit firm merger to stockholders is a function of:

(a) Changes in Long-term Debt. Stockholders of clients that issue long-term debt in the years following the audit merger are likely to benefit from retaining the acquiring audit firm. By using the Big Eight firm, these clients reduce the cost of new debt, since audit quality is increased. We estimate the variable by the net change in long-term debt in the three years following the merger as a percentage of the book value of total assets. One limitation of this measure is that it does not include new debt issued to retire old debt, reducing the power of the tests.

(b) Changes in Contributed Capital. Clients that issue additional equity in the years following a takeover are also expected to retain the acquiring audit firm. Existing stockholders receive a higher price for equity when they have a Big Eight audit firm because the higher audit quality reduces the

manager/shareholder conflict of interest. We estimate the variable by the change in contributed capital in the three years following the merger as a percentage of the book value of total assets.

(c) Leverage. Clients that are close to lending contract constraints are less likely to remain with a Big Eight firm following an audit merger since the accompanying increase in audit quality reduces management's ability to select accounting methods that minimize the probability of technical default. Leverage has been used as a measure of a company's proximity to its lending constraints in the accounting literature.<sup>7</sup> We, therefore, include leverage as an explanatory variable, and expect that the probability that a client remains with a Big Eight acquirer following an audit merger is a decreasing function of leverage. The variable is estimated by long-term debt as a percentage of the book value of total assets.

(d) Size. Large clients are more likely to remain with the Big Eight acquirer than to return to a small audit firm for two reasons. First, large clients are expected to have more disperse stock ownership and, therefore, greater conflicts of interest between stockholders and managers.<sup>8</sup> These clients are expected to benefit from the high quality audits offered by an acquiring Big Eight firm. Second, large clients are expected to be more geographically diversified and to, therefore, value the Big Eight firm's network of offices. Size is measured by the natural logarithm of the book value of total assets.<sup>9</sup>

(e) Growth in Size. Growth in size is used to reflect the same differences in demand for Big Eight and non-Big Eight firms' services as size. Clients that have grown prior to the merger are expected to remain with the acquiring firm. Growth in size is measured by the average percentage rate of growth in the book value of total assets in the three years prior to the merger.



In summary, we predict that the probability that a client will remain with the acquiring Big Eight firm is a function of changes in long-term debt and contributed capital, leverage, size, and growth in size.<sup>10</sup>

### 3. EMPIRICAL TESTS AND RESULTS

#### 3.1 Sample Selection and Test Design

To test the implications of the theory on clients' responses to a Big Eight merger with their non-Big Eight firm, we use a sample of clients from the two largest mergers in the auditing industry's history. Both are Big Eight mergers with smaller auditors. On August 12, 1977, Touche Ross announced a merger with J. K. Lasser, while on October 23, 1978, Ernst and Ernst, and Leidesdorf and Company announced their decision to combine. **The Wall Street Journal** reported the merger discussion between Leidesdorf and Ernst and Ernst on October 10, 1978. A list of clients of the acquired firms was collected from the 1976 and 1978 volumes of **Who Audits America**. This sample comprises 207 clients that are listed on the New York Stock Exchange (NYSE), the American Exchange (AMEX), and the Over the Counter (OTC) exchange. We require companies to have 10-K statements filed with the Chicago office of the SEC or to be included in Moody's Industrial, Finance or Over-the-Counter Manuals. Companies that change to another Big Eight firm during two years following the merger are also eliminated from the sample. These restrictions reduce the sample from 207 to 91 corporations. A decomposition of the sample and reasons for exclusions are presented in Table 1.

Thirteen of the usable 91 sample companies changed to a non-Big Eight audit firm during the two years following the merger, five clients changed to another Big Eight firm,<sup>11</sup> and the remainder stayed with the acquiring Big Eight firm. This incidence of auditor changes, an average of nine percent per year, is

substantially higher than the population incidence of auditor changes. Coe and Palmon [1979] report that the annual auditor turnover rate for a sample of NYSE, AMEX and OTC companies from 1952 to 1975 was two percent.

### 3.2 Results

Means and standard deviations of changes in long-term debt and changes in contributed capital following the merger, leverage, size and growth in size are reported in Table 2 for the sample of companies that retain the Big Eight firm after the merger, and for the sample of clients that return to a small auditor. The clients that remain with the acquiring Big Eight firm are larger, have higher asset growth rates, and lower leverage than clients that return to a smaller auditor. Student t statistics are reported to compare differences in means for the two sample.<sup>12</sup> The statistics for these three variables are significant at the .005, .010 and .050 levels respectively. Clients that return to a non-Big Eight audit firm issue less long-term debt in the three years following the merger than clients that retain the Big Eight firm. While the difference in sample means for this variable is only significant at the .100 level, the variable is measured with error; it ignores debt issued to retire existing debt. This measurement error is likely to bias the coefficient on the measured variable downward [see Maddala, p. 294].

The differences in financial characteristics for clients that remain with an acquiring Big Eight firm and clients that change to another smaller auditor are generally consistent with the theory. Clients that issue new debt after the audit merger prefer the Big Eight firm to another non-Big Eight firm. One explanation of this finding is that the new auditor provides a higher quality audit service than the former auditor. These benefits can be captured by stockholders when new debt is issued. The results for size and asset growth

suggest that stockholders of large, widely-held corporations are more likely to benefit from the higher audit quality of a Big Eight firm. Large and growing clients are also expected to be geographically diversified. They, therefore, have an incentive to remain with the acquiring Big Eight firm to take advantage of its disperse network of offices. Finally, high levered firms are less likely to retain the Big Eight acquirer following the merger. Recent accounting studies postulate that a company's proximity to its lending contract constraints is an increasing function of leverage. An audit merger, therefore, reduces the wealth of stockholders of highly levered clients since, if the client retains the Big Eight acquirer, the increase in audit quality reduces managers' ability to select accounting methods to minimize the probability of technical default.

The variable changes in contributed capital does not support the theory. Clients that return to a smaller audit firm issue more equity following the takeover than clients that remain with the acquirer, the opposite of our prediction.

A second test uses a multivariate model to compare clients that remain with an acquiring Big Eight audit firm to those that return to a smaller auditor. The dependent variable takes the value one if the client remains with the Big Eight firm, and zero if the client changes to a non-Big Eight firm in the two years following the merger. We use a probability logit model to estimate the association between each of the explanatory variables and the dichotomous variable.<sup>13</sup>

$$\tilde{D}_i = \beta_0 + \beta_2 \Delta LTD_i + \beta_4 \Delta CC_i + \beta_5 LEV_i + \beta_1 V_i + \beta_2 \Delta V_i + \tilde{u}_i$$

where

$$D = \begin{cases} 1 & \text{if the client retains the acquiring auditor in the two years following the merger.} \\ 0 & \text{if the client changes to a small auditor in the two years following the merger.} \end{cases}$$

- $\Delta LTD$  = The change in long term liabilities during the three years following the merger as a percentage of total book value of the firm.
- $\Delta CC$  = The change in contributed capital during the three years following the merger deflated by the book value of the firm.
- $LEV$  = Long-term liabilities at the beginning of the merger year deflated by the book value of the firm.
- $V$  = Natural logarithm of the book value of the firm in the year of the auditor merger (in 000's).
- $\Delta V$  = The average percentage growth rate for assets in the three years prior to the merger.

The independent variables are likely to be correlated. A correlation matrix, presented in Table 3, confirms the existence of collinearity. Four of the ten correlation coefficients are more than two standard deviations from zero (the critical value is .210). Collinearity implies that the individual coefficients cannot be precisely estimated and that the estimates are sensitive to adding or dropping independent variables and observations.

The signs of the coefficients on the explanatory variables generally reinforce the univariate test results. The coefficients are consistent with our predictions for three of the five variables. Corporate size and growth in size are positively related to the probability of remaining with the acquiring Big Eight firm. The probit coefficients on these variables are significant at the .005 and .050 levels, respectively. These results support the hypotheses that clients whose stockholders are likely to benefit from a Big Eight firm's audit quality and geographic dispersion have an incentive to remain with the acquirer.

The coefficient on leverage is negative, as predicted, and marginally significant (at the .100 level). Recent accounting studies hypothesize that high levered companies are more likely to violate lending contract constraints. They, therefore, have an incentive to return to another small auditor since a Big Eight firm is likely to reduce managers' ability to select accounting



methods to minimize the probability of technical default.

The coefficients on the two remaining variables, the change in contributed capital, and the net change in long-term liabilities, are not statistically significant. The coefficient on the change in contributed capital has the opposite sign to that predicted.

The overall significance of the model is evaluated by a Chi Square test. The Chi Square statistic is 53.165 and significant at the .005 level. We also report the model's ability to correctly classify clients that changed to a non-Big Eight firm and those that remained with the acquiring audit firm. We use a symmetric loss function that assumes the costs of Type I and Type II errors are equal.<sup>14</sup> The model correctly classifies six of the thirteen clients that changed to a non-Big Eight firm and 76 of the 78 clients that retained the acquiring Big Eight audit firms. These classifications are compared to those from a naïve decision rule that randomly assigns clients to groups with probabilities equal to group frequencies.<sup>15</sup> The logit model significantly outperforms this proportional chance model at the .005 level for classifying clients that remain with a Big-Eight firm and that change to another small audit firm.

One limitation of our tests is the bias induced by the method of sample selection. We are only able to identify and collect financial information for listed clients of the acquired auditor. These are typically the non-Big Eight firm's largest clients. We use corporate size as an independent variable. Exclusion of the small clients from our sample to satisfy data constraints, therefore, reduces the power of our tests since the theory predicts that smaller clients are more likely to change to another non-Big Eight audit firm following the merger.

A second limitation of the tests is that we lack sufficient data to use a holdout sample. To mitigate this limitation and validate the logit model classifications, we use a jackknife technique.<sup>16</sup> The logit model is estimated after omitting one company from the sample. The model is then used to classify that company as remaining with the Big Eight firm or changing to another small audit firm. This procedure is repeated 91 times, omitting each company from our sample one at a time. A summary of the classification results using this technique is presented in Table 4. The model correctly classifies four of the 13 clients that change to a non-Big Eight firm and 74 of the 78 clients that remain with the Big Eight firm. These results are compared to those of a proportional chance model that randomly assigns clients to groups with probabilities equal to group frequencies. The logit model outperforms the proportional chance model at the .05 level for companies that return to non-Big Eight auditors and clients that remain with the Big Eight acquirer following a merger.

#### **4. SUMMARY AND CONCLUSIONS**

The results of our tests provide preliminary evidence on economic variables that are associated with the responses of clients to mergers of their auditor with a Big Eight firm. Clients that are large, have high asset growth rates prior to the merger, low leverage, and issue new long-term debt following the merger are likely to remain with the acquirer. Clients that are small, have low asset growth, high leverage and do not issue new debt are likely to return to another non-Big Eight audit firm. These findings are consistent with our hypotheses. Large, high growth clients that issue new debt have an incentive to remain with the Big Eight firm to increase their audit quality. Agency theory predicts that these clients are then able to issue new debt at a higher price

than if they still used a non-Big Eight audit firm. Agency theory also implies that, *ceteris paribus*, stockholders of high levered clients are less likely to remain with an acquiring Big-Eight firm. These client are expected to be close to lending contract constraints. If they remain with the Big Eight acquirer, the increase in audit quality reduces managers' ability to select accounting methods that minimize the probability of technical default, consistent with our findings.

The findings for size and asset growth also support the geographical dispersion hypothesis. Large and growing clients are likely to be geographically diversified. They therefore have an incentive to remain with the acquiring Big Eight firm to take advantage of its national and international network of offices.

One reason for Big Eight firms to merge with non-Big Eight firms is to increase their client portfolio. This strategy will succeed only if the target audit firm's clients remain with the acquirer. Our findings provide preliminary evidence on economic variables that might be useful to potential Big Eight audit firms for assessing the responses of clients of a small audit firm to a proposed merger.

The tests presented in this paper are based on rather limited data. Our empirical analysis is, therefore, somewhat crude. To compensate for this problem, a number of issues for future investigation are suggested. One issue is to evaluate the predictive ability of our model. We do not use a holdout sample in this paper because of data constraints. A second unresolved issue is the finding that firms which issue new equity following the audit firm merger are more likely to change to another small audit firm, opposite to our hypothesis. A third topic for future investigation is to use the economic variables identified in this study to explain voluntary changes by clients from

non-Big Eight firms. Such a study would not be subject to the data constraints we encounter, but would not reflect the same decision context that was discussed in this paper.



## FOOTNOTES

1. Ninety-eight clients changed from a smaller to a Big Eight auditor by merger, 74 by voluntary displacement, and 29 companies changed to a smaller auditor.
2. See U. S. Congress, 1976, p. 45.
3. A similar definition is used by Watts and Zimmerman (1980) and by DeAngelo (1981b).
4. An alternative solution to this problem is for auditors to announce their quality level for each audit contract. Differing levels of quality would be supplied by each auditor, just as differing car qualities are produced by GM (Cadillacs, Buicks, Chevrolets, etc.). This may indeed happen when there exists a highly visible means of distinguishing clients employing the different quality services. For example, a Big Eight firm may offer two levels of quality, a higher quality service to listed clients, and a lower quality service to unlisted clients. In this case, the market is provided with an unambiguous signal of which quality level is supplied to a given client. However, since it is costly to provide a signal of each quality level the problem is not eliminated.
5. DeAngelo, 1981b, p. 185.
6. A third possibility is for the small auditor to split into two firms at acquisition. Those clients demanding the Big Eight firm's services will employ the acquiring auditor. Clients demanding the former audit quality will remain with the spun-off subunit of the acquired auditor.
7. See Holthausen and Leftwich (1983) and Watts and Zimmerman (1985) for a summary of this literature.
8. An alternative proxy for the dispersion of ownership, the managers' share of the company, is not readily available for most of the companies in our sample.
9. We also use the book value of the client's assets and the square root of that number as independent variables. The results are independent of the transformations used.
10. Our analysis also implies that an audit merger will only be feasible if the start-up costs avoided by clients that remain with the acquiring Big Eight firm exceed the transaction costs of the merger, including the start-up costs incurred by target clients changing to another small auditor following the merger, costs of moving and retraining the personnel of the acquired firm.
11. Clients have an incentive to change auditors within the Big Eight if audit quality differs within the Big Eight.

12. This statistical test assumes that the two populations are normal with equal variances. Each t value is then drawn from a t distribution with  $(N + M - 2)$  degrees of freedom, where N is the number of observations in one sample and M the number in the other. Malinvaud (1970) discusses the normality assumption, and claims that the significance level of a test of differences in means is not highly sensitive to deviations from normality.
13. Ordinary Least Squares (OLS) yields heteroscedastic error terms when the dependent variable is dichotomous. OLS parameter estimates are therefore inefficient, in which event, standard tests of statistical significance lack power. We use a logit model to estimate the association between the explanatory variables and the probability of retaining the acquiring Big Eight audit firm. The logit model generates unbiased and consistent parameter estimates. For a description of the logit technique, refer to Theil (1971).
14. If the costs of the two types of classification differ, an asymmetric loss function must be specified.
15. For a description of this proportional chance model and the test statistic we use to compare its classifications with those of the logit model see Morrison (1969).
16. See Efron (1982) for a description of the jackknife technique.

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**TABLE 1**

Composition of Sample for  
J. K. Lasser and Leidesdorf Mergers

Clients listed in <u>Who Audits America</u>	207
Less: Clients with accounting data unavailable	<u>111</u>
	<u>96</u>
Clients staying with acquiring auditor	78
Clients changing to a smaller auditor following the merger	13
Clients changing to another Big Eight auditor following the merger	<u>5</u>
	<u>96</u>

TABLE 2

Sample Means for Independent Variables for Clients of  
J.K. Lasser and Leidesdorf That Stay  
With an Acquiring Big Eight Firm and Return to a  
Non-Big Eight Firm Following a Merger  
 (Standard Deviations in Parentheses)

VARIABLE	TOTAL SAMPLE N = 96	CLIENTS STAYING WITH BIG EIGHT FIRM N = 83	CLIENTS RETURNING TO A NON-BIG EIGHT FIRM N = 13	t STATISTIC FOR TEST OF DIFFERENCE IN MEANS
Change in LT Debt	4.454 (16.012)	5.526 (14.377)	- 1.978 (23.331)	1.577 <sup>b</sup>
Change in Issued Cap.	3.652 (19.587)	2.046 (11.867)	13.289 (43.085)	- 1.946 <sup>c</sup>
Leverage	51.523 (23.748)	49.023 (19.481)	66.523 (38.861)	2.533 <sup>a</sup>
Log of size	9.641 (1.587)	9.831 (1.540)	8.507 (1.430)	2.895 <sup>a</sup>
Asset Growth	25.742 (46.333)	30.169 (47.881)	- 0.821 (22.315)	2.285 <sup>a</sup>

<sup>a</sup> Significant at .025 level.

<sup>b</sup> Significant at .100 level.

<sup>c</sup> Significant at .95 level.

TABLE 3

Correlation Matrix of Independent Variables for Clients  
of J.K. Lasser and Leidesdorf

	$\Delta LTD$	$\Delta CC$	LEV	V	$\Delta V$
$\Delta LTD$	1.000				
$\Delta CC$	0.344 <sup>a</sup>	1.000			
LEV	-.465 <sup>a</sup>	-.074	1.000		
V	-.106	0.166	0.255 <sup>a</sup>	1.000	
$\Delta V$	0.253 <sup>a</sup>	-.138	-.057	-.112	1.000

<sup>a</sup>Greater than two standard deviations from zero.

$\Delta LTD$  = change in long-term debt in three years following merger.

$\Delta CC$  = change in contributed capital in three years following merger.

LEV = long-term debt divided by book value of assets.

V = logarithm of book value of assets.

$\Delta V$  = average asset growth rate for two years prior to merger.



TABLE 4

Logit Model of Auditor Changes By Clients  
of J.K. Lasser and Leidesdorf Following Mergers  
with Big Eight Audit Firms

$$\tilde{D}_i = \beta_0 + \beta_1 V_i + \beta_2 \Delta V_i + \beta_3 \Delta LTD_i + \beta_4 \Delta CC_i + \beta_5 LEV_i + \tilde{u}_i$$

	PREDICTED SIGN	COEFFICIENTS (t-Statistics)	JACKKNIFE RESULTS
$\beta_0$		3.905 (1.436)	
$\beta_1$	+	0.757 (2.451) <sup>a</sup>	
$\beta_2$	+	0.019 (1.718) <sup>b</sup>	
$\beta_3$	+	0.008 (0.312)	
$\beta_4$	+	-.020 (-.084)	
$\beta_5$	-	-.027 (-1.528) <sup>c</sup>	
$\chi^2$		53.165 <sup>a</sup>	
Total Correctly Predicted (percent)		82 (90.11) <sup>a</sup>	78 (85.71) <sup>b</sup>
Clients Staying with Big Eight Firm Correctly Predicted (percent)		76 (97.44) <sup>a</sup>	74 (94.87) <sup>b</sup>
Clients Switching to non- Big Eight Firm Correctly Predicted (percent)		6 (46.15) <sup>a</sup>	4 (30.77) <sup>b</sup>

<sup>a</sup> Significant at .005 level

<sup>b</sup> Significant at .050 level

<sup>c</sup> Significant at .100 level

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